5

WHAT IS CLAIMED IS:

1. A continuous process for the preparation of ethyl lactate (I) by esterification of lactic acid [or of a lactic acid composition] using ethanol, according to the reaction (1):

$$CH_3CH(OH)CO_2H + CH_3CH_2OH = CH_3CH(OH)CO_2CH_2CH_3 + H_2O$$
 (1)

which consists in reacting said lactic acid with an ethanol/lactic acid according to initial molar ratio at least equal to 2.5, in the 10 presence of a catalyst, at reflux of the reaction medium, which lies at approximately 100°C, under an absolute pressure ranging from 1.5 to 3 bar and preferably ranging from 1.5 to 1.8 bar; 15 said process being characterized in that water/ethanol gas mixture close to the azeotrope is continuously extracted from the esterification reaction medium, in that this gas mixture is then dehydrated directly using molecular sieves, 20 that an ethanol gas stream, which can be recycled esterification reaction medium, to the stream composed of water and of ethanol are then recovered from said dehydration, which composed of water and of ethanol is subjected to a distillation, from which water and a water/ethanol 25 obtained, which water/ethanol azeotrope are azeotrope is injected at the top of the column for the distillation of the gas mixture extracted from the esterification reaction medium, and in that is then continuously 30 crude ethyl lactate extracted, which crude ethyl lactate is subjected to purification, from which an ethyl lactate of high purity and heavy products are obtained.

35 2. The process as claimed in claim 1, characterized in that use is made of an ethanol/lactic acid

initial molar ratio ranging from 3 to 4.

5

- 3. The process as claimed in claim 1 or 2, characterized in that, for the dehydration of the gas mixture extracted from the reaction medium using molecular sieve, the PSA (Pressure Swing Adsorption) technique is used.
- 4. The process as claimed in claim 3, characterized 10 in that the selective adsorption of water, passing, at a pressure identical to that applied to the esterification reaction medium, the water/ ethanol mixture close to the azeotrope in the gas form through a bed of molecular sieve, and then 15 the desorption of the water adsorbed beforehand, lowering the pressure below 300 mbar and preferably below 100 mbar, are carried out alternately.
- 20 5. The process as claimed in claim 1, characterized in that the heavy products resulting from the purification of the ethyl lactate are recycled in the esterification reaction medium.